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09/961,020	09/21/2001	Hiroaki Kubo	JP920000259US1	5130

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EXAMINER

FLETCHER, JAMES A

ART UNIT PAPER NUMBER

2616

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/961,020

Applicant(s)

KUBO ET AL.

Examiner

James A. Fletcher

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-11,13-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11,13-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 21 December 2005 have been fully considered but they are not persuasive.

**In re page 15**, Applicant's Representative states: "The preceding combination of features requires that the recording means be disposed between the record control means and the reproduction control means."

The Examiner respectfully disagrees. Nowhere in independent claims 1, 9, and 15 is there a recitation of the location of the recording means between the record control means and the reproduction control means. Further, if there were such a recitation, it would be anticipated by the order of components in Figure 1 of Yamamoto.

**In re page 16**, Applicant's Representative states: "Applicants respectfully challenge such official notice and request that the Examiner support the preceding allegations by relevant and credible evidence from the prior art."

The Examiner wonders in what order the Applicant's Representative believes analog audio and video recorders store the information they receive. Even though the Examiner did cite analog recording devices as examples of notoriously well-known devices that record incoming signals in the order they are received, the Examiner further cites Klein (5,371,889), Column 1, lines 40-41; Creswell et al (5,384,831), Column 8, lines 20-22; Buckenmaier (5,388,074), Column 1, lines 63-65; Scheffer (5,502,601) Column 15, lines 5-6; and Ono et al (5,526,367) Column 4, lines 25-27 and

Column 6, lines 60-62. Clearly, from the cited references, recording signals in the order they are received is notoriously well known.

**Further in re page 16**, Applicant's Representative states: "the preceding combination of features in claims 1, 9, and 15 requires that the recording of the second compressed data by the recording means and the reading of the second compressed data from the recording means are performed in the same order which is most certainly not notoriously well known."

The Examiner notes that recording and reproduction of signals in the order they were received clearly is well known, as analyzed and discussed above.

**In re page 17**, Applicant's Representative states: "the Examiner has not provided motivation derived from the prior art for modifying Yamamoto to include the preceding combination of features of claims 1, 9, and 15. The fact that the preceding allegation of the Examiner is allegedly *[sic]* well known (which it isn't) does not, by itself, constitute motivation to modify the primary reference of Yamamoto."

The Examiner notes that motivation to modify Yamamoto was provided by the Examiner in his statement "particularly in the absence of any disclosure to the contrary." Since it is clearly notoriously well known to record and reproduce signals in the order they were received as analyzed and discussed above, any modification from that standard operation would be an exception, and recording signals in the order they were received is normal and expected operation of any recorder not specifically intended to record received signals in a different order.

**Further in re page 17**, Applicant's Representative states: the Examiner has not mentioned 'additional second compressed data being recorded in the recording means'."

The Examiner respectfully disagrees, and notes that his citation of "Col 1, lines 7-8 'digital recording/reproduction apparatus'" is a means for recording such data.

**In re page 18**, Applicant's Representative states: "the Examiner is therefore arguing that Yamamoto discloses: monitoring means (22) for monitoring the amount of data transmitted from the reproduction control means (22) to the data reproducing means (24). First, the preceding statement inferred from the Examiner's analysis does not make any sense."

The Examiner is curious as to the Applicant's Representative's concerns, since they were not indicated in the arguments.

**In re pages 18 and 19**, Applicant's Representative states "claim 5 requires monitoring of data from the reproduction control means (22) to the data reproducing means (24) which Yamamoto most certainly does not disclose."

By way of explanation, since the data transfer to the PES packet reading block is done according to an available space in the PES packet buffer, those of skill in the art would understand that the reproduction control means must monitor the amount of data being sent as well as the space available for that data.

**In re page 19**, Applicant's Representative states: "Applicants cannot identify any switching means in FIG. 1 of Yamamoto."

As is understood by those of skill in the art, a demultiplexer, which is shown in Yamamoto's Fig. 1 as item 3, switches signals according to various criteria, among them being header data and carrier frequency.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-11, 13-16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (6,628,890), in further view of Thomason et al (6,018,612), and in further view of Burt et al (3,668,308).

**Regarding claims 1 and 9**, Yamamoto et al disclose an apparatus and method for recording and reproducing digital data, comprising:

- receiving means for receiving first compressed data composed of a plurality of packets, the first compressed data including a plurality of programs multiplexed in a time division manner (Col 4, lines 57-63 "The demodulation/error correction unit 2 performs demodulation and error correction for the bitstream input from the tuner 1, converts the same into a transport stream [TS] defined by MPEG2 system, and output the TS to the demultiplexer unit 3. The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input");

- data separating means for extracting specific compressed audio/video data corresponding to a desired program from the first compressed data received by the receiving means (Col 4, lines 62-64 “The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input”);
- record control means for generating second compressed data including the compressed audio/video data extracted by the data separating means (Col 4, line 67 -Col 5, line 2 “ The PES packet storage block 8 records the audio or video PES packet input from the demultiplexer unit 3, in the A/V-HDD1”);
- recording means for recording the second compressed data generated by the record control means (Col 1, lines 7-8 “digital recording/reproduction apparatus”);
- data reproducing means for decoding the compressed audio/video data included in the second compressed data (Col 5, lines 23-26 “The reproduction device 32 comprises...an A/V decoder 24”);
- reproduction control means for reading the second compressed data from the recording means and transmitting the second compressed data to the data reproducing means (Fig. 1, item 22 “navigation control block”); and
- Yamamoto et al suggest a means for controlling the transmitting and reading of the data to and from the recording means in a time division manner in that he discloses a recording process (Col 4, line 67 – Col 5, line 2) and a

reproduction process (Col 5, lines 39-44) that take place at different times, but does not specifically disclose this function as being time-division multiplexing.

Thomason et al teach an apparatus for recording and reproducing digital data comprising a time division control means for controlling the transmitting and reading of the second compressed data to and from the recording means in a time division manner (Col 4, lines 43-51 "Data arrives at the input terminal 50...but as the disk in the main memory 36 may be temporarily busy for another operation, the data arriving will be buffered in an input buffer 35a... As soon as the disk is capable of receiving the data, the data stored in the input buffer 35a is...applied to the input 54 of the main memory 36, for storage on the disk" and Col 4, lines 53-56 "Data will also be regularly requested from the main memory disk 36 to be displayed on the TV screen. Again the disk may be temporarily busy for another operation. Data is stored in the output buffer 35b is now supplied to the output 51b, and thus applied to the output terminal 53").

As taught by Thomason et al, time division multiplexing of a read/write head allows for apparent simultaneous recording and reproduction, which improves the performance of the recording and reproducing apparatus and increases its value to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to provide for time division multiplexing of a single read/write head on the main memory.



Yamamoto and Thomason only discuss the order of recording and reproduction in the "prior art" section, and are silent on the order that data is recorded and reproduced.

The examiner takes official notice that, particularly in the absence of any disclosure to the contrary, the recording and reproduction of data in the order it is received is notoriously well known, widely used, and commercially available in such devices as analog recorders of audio, video signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify either Yamamoto or Thomason to disclose recording and reproducing data in the order that it is received.

Yamamoto does not explicitly disclose a means to bypass the recording and reproduction steps of his disclosed invention, although Thomason does teach a bypass of data from the main memory 36 through the DMA controller 32.

Further, Burt et al teach a system wherein the signal being recorded is simultaneously provided to a display (Col 4, lines 60-65 "video information is stored on video tape and simultaneously displayed to the pilot on a TV monitor. The recording on the tape and play back is designed so as to form a continuously moving map of the area and at any time the pilot can stop the real time display and replay, stop action, or slow motion any portion of the recorded video picture").

As taught by Burt et al, the simultaneous display of a recorded image signal has advantages in that the user can monitor what is being recorded, and, if

necessary, affect that recording, or review what has been recorded when necessary or convenient.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to permit simultaneous viewing and reproduction of the video signal.

**Regarding claim 15**, Yamamoto et al disclose an apparatus for recording and reproducing digital data, comprising:

- a receiver for receiving first compressed data composed of MPEG2\_TS data, the first compressed data including a plurality of programs multiplexed in a time division manner (Col 4, lines 57-63 "The demodulation/error correction unit 2 performs demodulation and error correction for the bitstream input from the tuner 1, converts the same into a transport stream [TS] defined by MPEG2 system, and output the TS to the demultiplexer unit 3. The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input");
- a filter for extracting specific compressed audio/video data corresponding to a desired program from the first compressed data received by the receiver (The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input");
- a data unloader for generating second compressed data composed of MPEG2-PES data including the compressed audio/video data extracted by the filter (Col 4, line 67 -Col 5, line 2 " The PES packet storage block 8

records the audio or video PES packet input from the demultiplexer unit 3, in the A/V-HDD1”);

- a recorder for recording the second compressed data generated by the data unloader (Col 1, lines 7-8 “digital recording/reproduction apparatus”);
- reproduction control means for reading the second compressed data from the recorder and transmitting the second compressed data to the decoder (Fig. 1, item 22 “navigation control block”);
- a decoder for decoding the compressed audio/video data included in the second compressed data (Col 5, lines 23-26 “The reproduction device 32 comprises...an A/V decoder 24”).
- Yamamoto et al suggest a means for controlling the transmitting and reading of the data to and from the recording means in a time division manner in that he discloses a recording process (Col 4, line 67 – Col 5, line 2) and a reproduction process (Col 5, lines 39-44) that take place at different times, but does not specifically disclose this function as being time-division multiplexing.

Thomason et al teach an apparatus for recording and reproducing digital data comprising a time division control means for controlling the transmitting and reading of the second compressed data to and from the recording means in a time division manner (Col 4, lines 43-51 “Data arrives at the input terminal 50...but as the disk in the main memory 36 may be temporarily busy for another operation, the data arriving will be buffered in an input buffer 35a... As soon as the disk is capable of receiving the data, the data stored in the input buffer 35a

is...applied to the input 54 of the main memory 36, for storage on the disk” and Col 4, lines 53-56 “Data will also be regularly requested from the main memory disk 36 to be displayed on the TV screen. Again the disk may be temporarily busy for another operation. Data is stored in the output buffer 35b is now supplied to the output 51b, and thus applied to the output terminal 53”).

As taught by Thomason et al, time division multiplexing of a read/write head allows for apparent simultaneous recording and reproduction, which improves the performance of the recording and reproducing apparatus and increases its value to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to provide for time division multiplexing of a single read/write head on the main memory.

Yamamoto and Thomason only discuss the order of recording and reproduction in the “prior art” section, and are silent on the order that data is recorded and reproduced.

The examiner takes official notice that, particularly in the absence of any disclosure to the contrary, the recording and reproduction of data in the order it is received is notoriously well known, widely used, and commercially available in such devices as analog recorders of audio, video signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify either Yamamoto or Thomason to disclose recording and reproducing data in the order that it is received.

Yamamoto and Thomason only discuss the order of recording and reproduction in the "prior art" section, and are silent on the order that data is recorded and reproduced.

The examiner takes official notice that, particularly in the absence of any disclosure to the contrary, the recording and reproduction of data in the order it is received is notoriously well known, widely used, and commercially available in such devices as analog recorders of audio, video signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify either Yamamoto or Thomason to disclose recording and reproducing data in the order that it is received.

Yamamoto does not explicitly disclose a means to bypass the recording and reproduction steps of his disclosed invention, although Thomason does teach a bypass of data from the main memory 36 through the DMA controller 32.

Further, Burt et al teach a system wherein the signal being recorded is simultaneously provided to a display (Col 4, lines 60-65 "video information is stored on video tape and simultaneously displayed to the pilot on a TV monitor. The recording on the tape and play back is designed so as to form a continuously moving map of the area and at any time the pilot can stop the real time display and replay, stop action, or slow motion any portion of the recorded video picture").

As taught by Burt et al, the simultaneous display of a recorded image signal has advantages in that the user can monitor what is being recorded, and, if

necessary, affect that recording, or review what has been recorded when necessary or convenient.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to permit simultaneous viewing and reproduction of the video signal.

**Regarding claims 2 and 10,** Yamamoto et al disclose an apparatus and method for recording and reproducing digital data wherein the first compressed data is MPEG2-TS data and the second compressed data is MPEG2-PES data (Col 7, lines 22-24 "The demultiplexer unit 3 demultiplexes, from the input TS, an audio or video PES packet...and outputs the PES packet").

**Regarding claims 3, 11, and 16,** Yamamoto et al disclose an apparatus and method for recording and reproducing digital data wherein the transmitting and reading of the data to and from the recording means in a time division manner in that he discloses a recording process as analyzed and discussed above, but does not specifically disclose this function as being time-division multiplexing.

Thomason et al teach an apparatus for recording and reproducing digital data comprising a time division control means for controlling the transmitting and reading of the second compressed data to and from the recording means in a time division manner as analyzed and discussed above.

Thomason further teaches the time division control means is disposed between the record control means and the recording means with respect to the second compressed data being transmitted to the recording means (Fig. 1, items 35 "BUFFER

MEM.," 31 "DMA contr.," 32 DMA contr.," and 36 "MAIN MEM." and Col 4, lines 43-51), and wherein the time division control means is disposed between the recording means and the reproduction control means with respect to the second compressed data being transmitted from the recording means (Fig 1, items 35 "BUFFER MEM.," 33 "DMA contr.," 32 "DMA contr.," and 36 "MAIN MEM.," and Col 4 lines 43-51).

As taught by Thomason et al, time division multiplexing of a read/write head allows for apparent simultaneous recording and reproduction, which improves the performance of the recording and reproducing apparatus and increases its value to the user, and positioning the controls for that time division demultiplexing between the source and destination of the signals being demultiplexed allows for the demultiplexer to treat the signals as part of their path.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to provide for time division multiplexing of a single read/write head on the main memory and to provide that time division multiplexing between the input and memory, and the memory and output.

**Regarding claims 5, 14, and 18,** Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising monitoring means for monitoring the amount of data transmitted from the reproduction control means to the data reproducing means (Col 8, line 66 - Col 9, line 1 "the navigation control block 22 instructs the data transfer to the PES packet reading block 21 according to an available space in the PES packet buffer 23").

**Regarding claims 6 and 19,** Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising switching means for switching between the compressed audio/video data extracted by the data separating means to the data reproducing means (Col 5, lines 28-31 "The user interface control block 25 receives a playback command for normal play or trick play, entered by a user, and outputs the entered playback command for normal play or trick play to the navigation control block 22") and transmitting the second compressed data from the reproduction control means to the data reproducing means (Fig. 1, item 22 "navigation control block").

**Regarding claim 7,** Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising video data decoding section and audio data decoding section for decoding the compressed video data and compressed audio data, respectively, in the data reproducing means (Col 5, lines 53-56 "The A/V decoder 24 decodes the audio or video PES packet data input by the PES packet buffer 23, and outputs the video data to the digital encoder 26 and the audio data to the audio DAC 27, respectively").

**Regarding claims 8 and 20,** Yamamoto et al disclose an apparatus for recording and reproducing digital data wherein the recording means is a hard disk (Col 1, lines 6-10 "a digital recording/reproduction apparatus for recording/reproducing digital image data which is high-efficiency coded, to/from a random access recording medium such as an A/V-HDD (Audio/Video-Hard Disk Drive)").



**Regarding claim 13**, Yamamoto et al disclose a method of recording and reproducing digital data comprising the steps of:

- transmitting the compressed audio/video data extracted in the extracting step to the data reproducing means (Col 8, line 66 - Col 9, line 4 “the navigation control block 22 instructs the data transfer to the PES packet reading block 21 according to an available space in the PES packet buffer 23. The PES packet reading block 21 extracts an audio or video PES packet from the A/V-HDD 1 [10], and output the PES packet data to the PES packet buffer 23”).
- while simultaneously blocking transmission of the second compressed data from the reproduction control means to the data reproduction means (Col. 5, lines 56-59 “The digital encoder 26 converts the video data received from the A.V decoder 24 into a television output signal, and outputs the signal to the outside.” There is no indication that any other signal, including any signal that might be made available to be recorded by AV-HDD 1 [10] being available for reproduction. The use of the word “or” means only one limitation need be discussed);

Yamamoto et al do not disclose a switch for selecting either the data to be recorded or the data being reproduced.

Burt et al teach a system where either the signal being input to the system for recording, or a signal that has already been recorded, can be selected for display to the user (Col 4, lines 60-65 “video information is stored on video tape and simultaneously displayed to the pilot on a TV monitor. The recording on the

tape and play back is designed so as to form a continuously moving map of the area and at any time the pilot can stop the real time display and replay, stop action, or slow motion any portion of the recorded video picture").

As taught by Burt et al, the simultaneous display of a recorded image signal has advantages in that the user can monitor what is being recorded, and, if necessary, affect that recording, or review what has been recorded when necessary or convenient.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to permit simultaneous viewing and reproduction of the video signal.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (571) 272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on (571) 272-7950. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAF  
28 February 2006

  
**James J. Groody**  
**Supervisory Patent Examiner**  
**Art Unit 2622** 2616